

POTAP'YEVSKIY, A.G.; PORUBINOVSKIY, A.I.

Welding thin sheet metal with electric rivets in an atmosphere
of carbon dioxide. Avtom.svar. 10 no.6:99-100 N-D '57.

(MIRA 11:1)

1.Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.
Ye.O. Patona AN USSR.

(Sheet metal--Welding)
(Protective atmospheres)

AUTHOR: Potap'yevskiy, A.G. SOV-125-38-2-7/1

TITLE: The Effect of Process Parameters in Welding with Thin Rods in Carbon Dioxide on the Intensity of Metallurgical Reactions (Vliyaniye sostavlyayushchikh rezhima svarki tonkoy provolokoy v srede uglekislogo gaza na intensivnost' metallurgicheskikh reaktsiy)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 2; pp 53-57 (USSR)

ABSTRACT: Experimental investigations were carried out for the purpose of revealing the effect of welding process parameters, i.e. electrode feed and welding rate, arc voltage and polarity of current, on the passage of additional elements during the welding process. The top layer of multi-layer welds fused on "St.3" steel, small ingots cast in a copper mold and metal drops deposited at high speed on a massive copper plate, were investigated. It was proved that in welding with thin rods in carbon dioxide with "Sv-10GS" (GOST Standard 2246-54) electrode, the character of metal transfer through the arc gap and the intensity of metallurgical reactions depend to a much higher degree on the arc voltage than on the electrode

Card 1/2

SCV-125-86-007/11

The Effect of Process Parameters in Welding with Thin Rods in Carbon Dioxide on the Intensity of Metallurgical Reactions

feed rate. It was concluded that the effect of welding process parameters on the intensity of metallurgical reactions is primarily connected with changes in the character of metal transfer through the arc gap. There are 6 tables, 1 diagram and 4 Soviet references.

ASSOCIATION: Institut elektrosvariki imeni Ye.O. Patona AN USSR (Institute of Electric Welding imeni Ye.O. Paton, AS Ukr SSR)

SUBMITTED: November 1, 1957

1. Steel--Welding

Card 2/2

SOV 123-88-3-12/13

AUTHORS: Zaruba, I.I., Dudko, B.A., and Potap'yevskiy, A.I.

TITLE: The Semi-Automat for Welding in Carbon Dioxide with a Thor Rod (Poluavtomat dlya svarki tonkoy provolekoy v uglekislomoy srede uglekislogo gaza)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 3, pp 83-85 (USSR)

ABSTRACT: The Institute of Electric Welding imeni Ye.O. Paton with the participation of the authors and engineers, V.Ya. Bobovetskiy, G.M. Gologovskiy, Yu.V. Vysotskiy, A.I. Porubinovskiy and mechanic Yu.M. Degtyarev, designed a small-sized hose semi-automat for welding in carbon dioxide with an electrode rod of 0.8 to 1.2 mm in diameter. The device was designed for welding joints on thin metal with different seam disposition. It can also be used to eliminate small welding defects and for small casting. The device consists of a holder, a feeding mechanism, a gas apparatus and a case, all of which are described and illustrated by a photograph and 2 schematic drawings. At present, the Institute has organized serial production of the described device. There is 1 photograph, 1 schematic drawing, and 1 diagram.

Card 1/2

SOV 125-58-3-12/15

The Semi-Automat for Welding in Carbon Dioxide with a Tain Rod

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona, AN USSR (Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: December 8, 1957

1. Arc welding machines--Design 2. Arc welding machines
Equipment 3. Arc welding--Electrodes 4. Carbon dioxide--Performance

Card 2/2

POTAP'YEVSKIY, A.G.

125-58-5-12/13

AUTHORS: Potap'yevskiy, A.G., Gologovskiy, G.M., and Manoylo, S.A.

TITLE: Semi-Automatic Device for welding Thin-Sheet Steel Under Assembly Conditions (Poluavtomat dlya svarki tonkolistovoy stali v montazhnykh usloviyakh)

PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 5, pp 89-91 (USSR)

ABSTRACT: A semi-automatic device for arc welding in carbon dioxide has been especially devised for assembling sheet metal structures. It permits welding in any position. The feed mechanism which weighs only 3 kg, is placed in a small knapsack carried by the operator on the back. It does not hamper the operator. The design and operation information is illustrated by a drawing and an electric diagram. The device is designed by the Electric Welding Institute imeni Paton and built at the Kiyev Mechanical Plant. There are 2 figures and 3 Soviet references.

Card 1/2

125-58-5-12/13

Semi-Automatic Device for Welding Thin-Sheet Under Assembly Conditions

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona AN UKrSSR (Welding
Institute imeni Ye.O. Paton of the AS UkrSSR) and Kiyevskiy
mechanicheskoy zavod (Kiyev Mechanical Plant)

SUBMITTED: February 22, 1958

AVAILABLE: Library of Congress

Card 2/2

Potap'yevskiy A. G.
Candidate of Technical Sciences
AUTHORS: Zaruba, I.I., and Potap'yevskiy, A.G., Engineer 125-58-6-3/11
TITLE: Peculiarities of Welding in Carbon Dioxide with Thin Electrode Rods (Osnobennosti protsessy svarki tonkoy elektrodnoy provolokoy v srede uglekislogo gaza)
PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 6, pp 32 - 41 (USSR)
ABSTRACT: Information is presented on some peculiarities of welding in carbon dioxide with thin electrode rods (0.5 to 1.2 mm) and various power sources. The characteristic feature of this kind of welding is a series of 100 to 150 short circuits per second in the arc gap. The number of short circuits and the size of electrode metal drops depend mainly on the arc voltage. The stability of the process rests upon a definite periodicity of changes in the arc gap, arc voltage and welding current during the process. The reliability of the arc excitation is determined mainly by the rate of current increase in short circuits and by its stabilized value. The optimum values of the increase of current intensity are given. Generators ensuring reliable excitation and a stable welding process are recommended. The dependence of the process of metal transfer through the arc gap on the value and rate of current increase in

Card 1/2

125-58-6-3/14

Peculiarities of welding in Carbon Dioxide With Thin Electrode Rods
short circuits is demonstrated. There are 5 oscillograms,
2 figures, 1 graph, 3 tables and 8 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki
imeni Ye.O. Paton AN UkrSSR (Order of Labor "Red Banner" Institute
of Electric Welding im. Ye. O. Paton, AS UkrSSR)

SUBMITTED: January 9, 1958

AVAILABLE: Library of Congress

Card 2/2 1. Welding-Characteristics 2. Arc welding electrodes-Applications

125-58-7-9/14

AUTHOR: Potap'yevskiy, A.G.

TITLE: Melting and Transfer of Metal in Welding with Thin Wire in Carbon Dioxide (Plavleniye i perenos metalla pri svarke tonkoy provolokoy v srede uglekislogo gaza)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 7, pp 52-59 (USSR)

ABSTRACT: Information is presented on results of experiments on electrode melting, metal transfer and spatter in welding with a thin standard wire in carbon dioxide. The observed metal transfer in welding with different wire feed, voltage and different polarity of the welding current is illustrated by films. The following conclusions are made: 1) the major quantity of energy (90.1 - 98.7 %) is liberated during the burning of the arc; 2) metal transfer in welding with a thin wire in carbon dioxide is accompanied by the closing of the arc gap and depends substantially on the dynamic properties of the power source; 3) spatter of metal depends on the welding process parameters and also on the dynamic properties of the power source. The author thanks engineer A.I. Porubinskiy for his assistance in the work. There are 5 graphs, 4 tables, 1 oscillogram, 4 series of photos, and 8 Soviet references.

Card 1/2

125-58-7-9/14

Melting and Transfer of Metal in Welding with Thin Wire in Carbon Dioxide

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona, AN USSR (Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: January 9, 1958

1. Arc welding--Photographic analysis 2. Arc welding--Electrodes

Card 2/2

POTAP'YEVSKIY, A. G., Cand Tech Sci (diss) -- "Investigation of the process of welding fine sheet steel in a carbon-dioxide medium". Kiev, 1959. 15 pp (Acad Sci Ukr SSR, Order of Labor Red Banner Inst of Electrowelding im Acad Ye. O. Paton), 150 copies (KL, No 10, 1960, 132)

207AP 'yovskiy, A.G.

25(1) **PHASE I BOOK EXPLANATION** 301/3421

Amendments made USSR, Kiev, Institut elektrosvariv imeni akademika Ye. O. Patona
 Pamyatnyy sbornik spetsial'nykh yazykovykh i promyshlennyykh, v. 2 (Introduction of
 New Welding Methods in Industry). Collection of Articles, No. 2. Kiev, Gos.
 izd-vo tekhn. lit-ry Ukrainskoy SSR, 1959. 194 p. Extract slip inserted.
 3,000 copies printed.

Ed.: V. Garkusha; Tech. Ed.: S. Matusevich.

PURPOSE: This book is intended for workers in the welding industry.

COVERAGE: The book contains a discussion of welding techniques and problems by
 groups of scientists and welders. Much attention is given to problems in the
 application of new methods of mechanical welding and electroslag welding.
 This is the second collection of articles under the same title prepared and
 published by the Institut elektrosvariv imeni Ye. O. Patona (Institute of Electric
 Welding, imeni Ye. O. Patona). The previous collection by Ye. O. Paton,
 Akademicheskoye izdatel'stvo Ukrainskoy Akademii Nauk, 1957, 194 p.
 There are no references.

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 Kozlov, A. A. [Candidate of Technical Sciences; Institut elektrosvariv
 imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], and
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 Sciences], N. I. Kozlovskiy [Candidate of Technical Sciences], A. M.
 Ponomarev [Engineer; Institut elektrosvariv imeni Ye. O. Patona
 (Electric Welding Institute imeni Ye. O. Paton)], S. I. Gerasimov [Candi-
 date of Technical Sciences, Chief of Welding Laboratory; Khar'kovskiy
 zavod imeni S. M. Kirova (Khar'kov Turbine Plant imeni
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 [Senior Engineer; Institut elektrosvariv imeni Ye. O. Patona (Electric
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 S. V. Kuznetsov, Supervisor of the Welding Laboratory; Stalingradskiy
 filial Odeskenskogo nauchno-issledovatskogo tsentra (Stalingrad Branch of
 Scientific Research Institute for Petroleum Machinery), and S. A. Zandberg [Chief
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 Institut elektrosvariv imeni Ye. O. Patona (Electric Welding
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 Engineer; zavod "Kol'sevskiy" (Kol'sevskiy Plant)]. Experience gained
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Amel'ko, A. Ye. [Candidate of Technical Sciences; Institut elektrosvariv
 imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)],
 N. A. Garkusha [Engineer], A. V. Prokhorov [Engineer; Zhdanovskiy
 zavod imeni I. I. Ilyina (Zhdanovskiy Plant imeni I. I. Ilyin in Zhdanov)], and S. V. Yungel
 [Engineer; Stalingradskiy filial Odeskenskogo nauchno-issledovatskogo tsentra
 (Stalingrad Branch of Scientific Research Institute for Petroleum Machinery)].
 High-strength steels for weldments 185

AVAILABLE: Library of Congress (TS 227-A559)

Card 7/7

12(3), 12(4), 12(5)

12(3), 12(4), 12(5)

AUTHOR: DALLS, B.A., Pater, V.Ya., Polarizansky, A.G., V.S., Vlasovnikov, V.V.

TITLE: Automatic Welding of Small Size Automobile Parts in a Carbon Dioxide Atmosphere

PERIODICAL: Avtomaticheskaya svarka, 1952, No 7, p. 22-23 (USSR)

ABSTRACT: The Institute of Electric Welding, USSR P.O. DALLS, has worked out a method of automatic welding of circumferential joints by means of thin wire in a protective atmosphere of carbon dioxide. This method has been applied to the welding of small-size automobile parts. The welding outfit encompasses the following main parts: 1) the welding machine; 2) wire spool; 3) cylinder with carbon dioxide; 4) oxygen regulator, and 5) carbon dioxide heater. The welding tool is equipped with a design for continuous movement of the electrode wire. The speed of movement can be at will changed by means of a speed change box, within the limits of 110-730 m/hour. At the Moscow Carburator

Card 1/1

Automatic Welding of Small Size Automobile Parts in a Carbon Dioxide Atmosphere

Plant, where at the present time the new welding machine is in operation, the method of soldering by high-frequency electric current had been formerly used, where the burning of thin metal work pieces often occurred, and the required strength of joints was affected. After the new method was taken up, the production capacity has increased 3-3.5 times, the quality of welded work pieces and the labor conditions were improved. The necessity of making copper rings for brazing and the application of sand blast cleaning of work pieces were eliminated. At the moment, the plant and the institute carry on their experiments in that field with a view to further developing this new method and applying it to other automobile parts. There are 2 tables, 1 diagram, 4 photographs and 1 Soviet reference.

Card 2/3

COX/155-10-7-10/12

Automatic Welding of Small Size Automobile Parts in a Carbon
Dioxide Atmosphere

ASSOCIATION: 1) Ordery trudoovogo krasnogo znaniya institut elektro-
svarki imeni Ye.O. Patona AN USSR (Order of the Red
Banner of Labor Institute of Electric Welding, AS
USSR imeni Ye.O. Paton); 2) Moskovskiy karbyuratornyy
zavod (Moscow Carburettor Plant)

Card 3/3

SOV/125-12-2-14/14

13(5)

AUTHOR:

Dudko, D.A., and Potap'yevskiy, A.G.

TITLE:

Semiautomatic Machine A-547-R for Welding Thin Metal in Carbon Dioxide (Poluavtomat A-547-R dlya svarki tonkogo metalla v srede uglekislogo gaza)

PERIODICAL:

Avtomaticheskaya svarka, 1959, Vol 12, Nr 2, pp 36-39 (USSR)

ABSTRACT:

Semiautomatic welding using fine wire in carbon dioxide is being used more and more in industry. The Welding Institute produced an experimental batch of machines for the purpose in 1957. Despite some defects, the method has achieved good results. The machine has been redesigned and is known as A-547-R. It has been in series production since 1958. It is intended for welding metal 1 - 3 mm thick and angled joints with a cathetus of 1 - 4 mm. Welding at up to 170 amps is possible in any spacious area. Wire 0.8-1.0 mm in diameter is used. The container is small, weighing 200 g, without water cooling. It is connected to the supply mechanism

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SOV/125-12-2-14/14

Semiautomatic Machine A-547-R for Welding Thin Metal in Carbon Dioxide

by 1200 mm of hose. Speed of supply of the electrode wire is constant and regulated at 100-360 m/hour. A circuit diagram of the machine is provided in the article. Battery charging generators or special generators (types listed) and rectifier VS-200 designed by the Institute can be used as a source of current. An independent feed for the excitation coil can be obtained from any source of direct current such as rectifiers VSA-5, VS-111, etc or from batteries switched in to the buffer circuit. Generators GSR-6000, GSR-9000, GSR-12000 can be used with self-excitation and a carbon voltage regulator or with independent feed for the excitation coil. Rectifier VS-200 is intended for use at up to 180 amps and 17-23 volts. It consists of a transformer with a sectioned primary winding, a rectifier block and induction coil, all mounted in one casing. It has 5 stages for regulating the idling voltage. In 1958 the Welding Institute, in cooperation with the Kiyev Electrical Instruments Factory, organized the production of an experimental batch of VS-200 rectifiers. At present the A-547-R machines are being

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USCOMM-DC-61004

8(5),18(5)

SOV/125-59-5-9/16

AUTHOR: Potap'yevskiy, A.G. and Mechev, V.S., Engineers

TITLE: The Use of Low Voltage Direct Current Generators With Self-Excitation, as Current Sources during Welding with Thin Wires With Carbon Dioxide

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 5 (74)
pp 83-86 (USSR)

ABSTRACT: The article discusses the use of the low-voltage generator type ZD-7.5/30 for welding with thin wires under carbon dioxide. V.M. Timofeyev and L.S. Surikov stated that the generator can be used without alterations. (Ref. 5). The investigations of the Institut Elektrosvarki (Institute of Electric Welding) Ref. 6,7 have shown, that welding under carbon dioxide with wire of 0.5 - 1.2 mm diameter simultaneously shows a great number of short circuits, on the average low short-circuits per second. The article presents new investigations, in which can be seen, that as current source for welding with thin wires under carbon dioxide low-voltage

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SOV/125- 59-5-9/16

The Use of Low Voltage Direct Current Generators with Self-Excitation, as Current Sources during Welding With Thin Wires With Carbon Dioxide

generators of direct current with self-excitation can be used, if an excitation winding is switched parallel. For the tests generators of type ZD-7.5/30 and converters of type ZP-7.5/30 were used. The converters were produced in the Yaroslavl' Electrical-Mechanical Plant. There are 2 photographs, 2 graphs and 2 Soviet references.

ASSOCIATION: Ordena trudovogo krasnogo znameni Institut elektro-svarki imeni Ye.O.Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O.Paton. AS UkrSSR)

SUBMITTED: January 19, 1959

Card 2/2

POTAP'YEVSKIY, Arkadiy Grigor'yevich; PATON, B.Ye., otv.red.; ASNIS, A.Ye.,
red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY,
V.V., red.; ZARUBA, I.I., kand.tekhn.nauk, red.vypuska; MAYEVSKIY,
V.V., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Welding in a protective atmosphere] Svarka v zashchitnykh gazakh.
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 97 p.
(MIRA 13:9)

(Welding)

(Protective atmospheres)

РСТАР'УС ХИХ, А.С.

PHASE I BOOK EXPLOITATION SOV/5078

Академија наук УРСР, Київ. Інститут електрозварювання

Введення нових способів зварки в промисловість, збірник статей.
Тр. 3. (Introduction of New Welding Methods in Industry; Col-
lection of Articles. V. 3) Київ, ДС, Ізд-во техн. літ-ри
УРСР, 1960. 207 с. 5,000 copies printed.

Sponsoring Agency: Одеса Трудового Крайного Інститут
електрозварки Імені Академіка Ye. O. Patona Академії наук
Української СР.

Ed.: M. Pisarenko; Tech. Ed.: S. Matusevich.

NOTE: This collection of articles is intended for personnel in
the welding industry.

COVERAGE: The articles deal with the combined experiences of the
Інститут електрозварки Імені Ye. O. Patona (Electric Welding
Institute Імені Ye. O. Paton) and several industrial enterprises
in solving scientific and engineering problems in welding.

technology. Problems in the application of new methods of me-
chanical welding and electroslag welding in industry are discussed.
This is the third collection of articles published under the same
title. The first two were written by Ye. O. Paton, Academician of
the Academy of Sciences Ukrainian SSR and Lenin prize winner.
There are no references.

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POTAP'YEVSKIY, A. G.

PHASE I BOOK EXPLOITATION

SOV/4632

Zaruba, Igor' Ivanovich, Boris Sergeevich Kasatkin, Nikolay Ivanovich
Kakhovskiy, and Arkadiy Grigor'iyevich Potap'iyevskiy

Svarka v uglekislom gaze (Carbon Dioxide Shielded [Arc] Welding) Kiyev,
Gostekhizdat, 1960. 223 p. 8,200 copies printed.

Ed.: V. Garkusha; Tech. Ed.: S. Matusevich.

PURPOSE: This book is intended for technical personnel concerned with welding processes.

COVERAGE: The authors discuss the results of research and industrial experience in welding with melting electrodes in a carbon dioxide atmosphere. Certain electric and metallurgical processes which occur in this type of welding are discussed and problems of automatic and semiautomatic welding techniques are considered. The authors describe construction of automatic and semiautomatic welders and present available information regarding their operation. No personalities are mentioned. There are 81 references: 74 Soviet, 6 English, and 1 German.

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S/125/61/000/003/004/014
D053/D113

Zaruba, I.I., Potap'yevskiy, A.G., and Lapchinskiy, V.F.

AUTHORS:

TITLE:

Effect of the dynamic characteristics of the power source upon carbon-dioxide-shielded welding with a wire electrode, 2 mm in diameter

Avtomaticeskaya svarka, no. 8, 1961, 31-40

PERIODICAL:

TEXT: Peculiarities of the carbon-dioxide-shielded welding process using a wire electrode 2 mm in diameter are described. The purpose of this work was to investigate the reason for a considerable metal spatter and a bad weld formation in this process, and to work out ways of eliminating these faults. The carbon-dioxide welding process with a consumable electrode, 2 mm in diameter, is performed by frequent short-circuiting of the arc gap. An examination of the welding process using high-speed photography and the oscillograms of the transfer and spattering of the weld metal depend on the dynamical properties of the power source, primarily on the rate at which the current rises at the moment when the arc gap is closed by a droplet of molten metal. The optimum rate of this short-circuit current (I_{sh}) rise was determined in

APPROVED FOR RELEASE

Effect of the dynamic characteristics...

S/125/61/000/008/004/014 ✓
D053/D113

a series of experiments conducted with an automatically fed wire electrode, 2 mm in diameter. The power was supplied by a BC-400 (VS-400) welding rectifier with a smoothly drooping exterior characteristic ($k \approx -0.06$ V/A). The rate of I_{sh} rise was controlled by an adjustable inductor connected in the circuit. Based on the experimental results obtained, the authors conclude that the weld formation can be improved and the spattering reduced to 4 - 6% of its original amount by keeping the ratio of the dI_{sh} to dt within 8 - 20 KA/sec. The existing power sources for welding, however, do not secure the necessary rates of the short-circuit current. As a substitute, standard welding rectifiers or generators can be used with an inductor or reactor connected in series in the welding circuit to keep the rate of the I_{sh} rise within a 10 - 20 KA/sec limit. Good results were obtained with the VS-400 rectifier and an inductor of $(3 \div 5)10^{-3}$ H, and with the CT-300 (SG-300) generator and the PCTJ-34 (RSTE-34) reactor. There are 6 figures, 3 tables, and 7 Soviet-bloc references.

Card 2/3

ACCESSION NR: AP4009279

S/0125/64/000/001/0001/0006

AUTHOR: Paton, B. Ye.; Potap'yevskiy, A. G.; Podola, N. V.

TITLE: Pulsation arc consumable-electrode welding with a programed control

SOURCE: Avtomaticheskaya svarka, no. 1, 1964, 1-6

TOPIC TAGS: dc arc welding, consumable electrode, program control welding, pulsation welding, pulsation arc welding

ABSTRACT: A new welding method is described in which short pulses are superimposed on a d-c arc for the purpose of considerably increasing the arc power at the moment of electrode-metal droplet formation. The pulse height, duration, and repetition frequency are program-controlled as well as the ratio of the principal d-c arc current to the pulse current. The physical phenomena in the pulsation arc have been studied by oscillographic and high-speed motion-picture techniques. The program control permits regulating wire melting, electrode-

Card 1/2

ACCESSION NR: AP4009279

metal transfer, chemical composition, shape, and size of the weld in all welding positions. The rate of electrode-wire melting may be increased by up to 30%. Wires of 1.6 and 2.0-mm diameter can be used instead of 1.0-1.2-mm for welding thin sheets. The advantages claimed also include: a higher range of usable currents, higher productivity, and simpler techniques in doing vertical, horizontal, and overhead welds. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut elektrosvar'ki im. Ye. O. Patona AN UkrSSR (Institute of Electric Welding, AN UkrSSR)

SUBMITTED: 11Jul63

DATE ACQ: 07Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

S/125/62/000/001/004/011
D036/D113

AUTHORS: Zaruba, I.I.; Potap'yevskiy, A.G.; Mechev, V.S.

TITLE: Improving the dynamic properties of welding generators

PERIODICAL: Avtomaticheskaya svarka, no. 1, 1962, 31-36

TEXT: The authors describe an auxiliary low-power current source connected up in parallel to a standard welding generator in order to improve the shape of the curve of variation of the short-circuit current and to obtain an optimum rate of current build-up during CO₂ arc welding with 0.8-1.2 mm welding wire. Its circuit diagram is shown in Fig. 1. The authors were awarded Author's Certificate No. 135991 of June 24, 1960, for such a current source. Previous attempts at adapting standard welding generators, such as the **re**-500 (GS-500) and the **re**-300 (GS-300), to provide a stable welding process under the above-specified welding conditions proved unsuccessful, because no attention was paid to these two factors. As a result of tests, the following conclusions were drawn: (1) A method was proposed for increasing the build-up rate of the short-circuit current in the welding circuit, thus allowing standard welding generators of the GS-500 and GS-300 type to be used

Card 1/16

L 61811-65 EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) Pf-4
 DJP(c) MJW/JD/UM/HW
 UR/0125/65/000/006/0016/0019
 621.791.856
 50
 49
 13

ACCESSION NR: AP5016016
 AUTHOR: Potap'yevskiy, A. G. (Candidate of technical sciences); Lapchinskiy, V. B.
 F. (Engineer); Buchinskiy, V. N. (Engineer)

TITLE: Transfer of electrode metal in pulse-arc welding in argon

SOURCE: Avtomaticheskaya svarka, no. 6, 1965, 16-19

TOPIC TAGS: arc welding, aluminum, aluminum alloy, stainless steel, copper, titanium, argon, high temperature effect, photography

ABSTRACT: Peculiarities of metal-transfer during argon-arc welding were studied for a series of materials in bottom, vertical, and overhead positions. The materials studied by high speed cinematic photography were: pure aluminum AD1, aluminum alloy AMg6, copper, titanium, and both stainless and carbon steels. The study showed that for normal argon-arc welding in a range of subcritical currents, the metal transfer proceeds in large drops with a frequency of 1-5 drops/sec. Photographs of the transfer process are shown for the materials and conditions listed above, under reverse polarity. Characteristic curves for the drop transfer and current change

Card 1/2

L 61841-65

ACCESSION NR: AP5016016

are presented for pulse-arc welding as a function of time. Transfer rate for normal arc welding is about 120-160 mm/sec, as compared to a maximum of 2000 mm/sec for pulse-arc welding. For pulse-arc welding, the energy, and consequently the minimal current for drop transfer of electrode metal increases with rod diameter. The pulse frequency was found to affect the size of the drops as well as the transfer rate. For practical use, 30-100 pulses/sec were adequate. Above 100 pulses/sec the drops do not have time to form; while below 30 pulses/sec, larger drops form, resulting in inferior transfer and seam formation. Orig. art. has: 4 figures, 1 table.

ASSOCIATION: Institut elektrosvariki im. Ye. O. Patona AN UkrSSR (Institute of Electric Welding, AN UkrSSR)

SUBMITTED: 26Dec64

ENCL: 00

SUB CODE: MM

NO REF SOV: 003

OTHER: 000

Card 2/2

L 3501-66 ENT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) MJW/JD/HM
ACCESSION NR: AP5023081 UR/0125/65/000/009/0030/0033 37
621.791.89:669.140 36

AUTHOR: Potap'yevskiy, A. G. (Candidate of technical sciences); Buchinskiy, V. N.
(Engineer) 3

TITLE: Pulsation-arc welding of Kh18N10T stainless steel 4

SOURCE: Avtomaticheskaya svarka, no. 9, 1965, 30-33

TOPIC TAGS: pulse welding, arc welding, stainless steel, welding electrode

ABSTRACT: The formation of an uniformly fused vertical or overhead weld in the welding of stainless, acid-resistant steels can be best assured by the argon-arc pulsation welding technique based on the use of a consumable electrode, as demonstrated by the results of this investigation. On the basis of tests in a semi-automatic welding machine with a fixed rate of feed of the electrode wire, it is established that Kh18N10T stainless steel with the thickness $\delta = 2-8$ mm can be welded in any spatial position by means of electrodes of 1.2-2.0 mm diameter. The welding rate based on this technique is, for vertical and overhead welds, 2.5-3.5 times as high as the rate of manual arc welding with a tungsten electrode, and it

Card 1/2

L 3501-66

ACCESSION NR: AP5023081

involves a lower consumption of argon and lower deformation of the weldment, and this technique is easily mastered by welders. Moreover, the properties of the welded joints produced by this method are the same as those of the joints produced by conventional argon-arc welding with a consumable electrode. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: Institut electrosvarki im.Ye.O.Patona AN UkrSSR (Electric Welding Institute, AN UkrSSR)

SUBMITTED: 08Jan65

ENCL: 00

SUB CODE: IE, MM

NO REF SOV: 005

OTHER: 000

Card

2/2

DP

L 02430-67 EWT(d)/EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) JD/IM
ACC NR: AP6032497 / SOURCE CODE: UR/0413/66/000/017/0049/0050

INVENTOR: Lebedev, V. K. ; Potap'yevskiy, A. G. ; Podola, N. V. ; Sheyko, P. P. ; Deyneko, M. P. ; Grodetskiy, Yu. S.

ORG: none

TITLE: Rectifying device for pulsation arc welding. Class 21, No. 185425
[announced by Institute of Electrical Welding im. Ye. O. Paton (Institut elektro-svarki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 49-50

TOPIC TAGS: arc welding, pulse welding, consumable electrode welding, welding electrode, pulse shaper, transformer, electric capacitor, resistor, welding rectifier, rectifier

ABSTRACT: An Author Certificate has been issued describing a rectifying device for consumable-electrode pulsation welding, containing a rectifier with a choke foil in the rectified current circuit connected in parallel to the rectifying pulse-shaping unit, powered from the power supply system through a transformer and

Card 1/3

UDC: 621.314.632:621.791.75

L 09430-67

ACC NR: AP6032497

an auxiliary rectifier. To improve the quality of welding and for controlling the pulse-shaping unit, a voltage feedback circuit is employed for the welding arc, using a peak transformer; the primary winding of the transformer is connected in parallel to the welding arc, while the secondary winding is connected to a slave multivibrator with a thyatron at the output. The pulse-shaping unit consists of a screw connected variable resistor and capacitor which, in turn, are connected in parallel to the auxiliary rectifier. A switching device circuit, such as an ignition, a variable discharge choke coil, and a resistor are connected with the pulse shaping unit (see Fig. 1). Orig. art. has: 1 figure. [Translation]

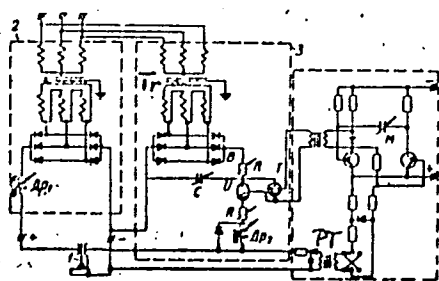


Fig. 1. Rectifying device for pulse arc welding.

1--Consumable electrode;
2--rectifier; Dr_1 --choke coil; 3--pulse shaping unit;
Tr--transformer of power-supply unit; B--auxiliary rectifier; PT--peak transformer; M--slave multivibrator; T--thyatron; R--controlled resistors; C--capaci-

Card 2/3

L 09430-67

ACC NR: AP6032497

tor; I--ignition; Dr₂--
variable discharge choke
coil.

SUB CODE: 13/ SUBM DATE: 11Jul63/

Card 3/3 *LC*

L 07952-67 EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k) JD/HM

ACC NR: AP6032496

SOURCE CODE: UR/0413/66/000/017/0049/0049

INVENTOR: Podola, N. V.; Potap'yevskiy, A. G.

31

ORG: none

B

TITLE: Rectifier for pulse-arc welding, Class 21, No. 185424

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 49

TOPIC TAGS: pulse welding, arc welding, pulse transformer, electric circuit, hysteresis loop, rectifier, consumable electrode welding

ABSTRACT: An Author Certificate has been issued describing a rectifying device for pulse-arc welding by a consumable electrode, containing a basic rectifier with a choke coil in the circuit of rectified current and an auxiliary rectifier connected in parallel with the basic rectifier and fed from the power-supply system through the pulse transformer. To increase the reliability of the device, a charging controlled choke coil and a saturated discharge choke coil with a rectangular hysteresis loop are connected to the primary circuit of the pulse transformer, whereupon the line of

Card 1/2

UDC: 621.314.632:621.791.75

L 07952-b7

ACC NR: AP6032496

capacitors is switched in parallel with the primary winding and the saturated choke coil (see Fig. 1). Orig. art. has: 1 figure. [Translation]

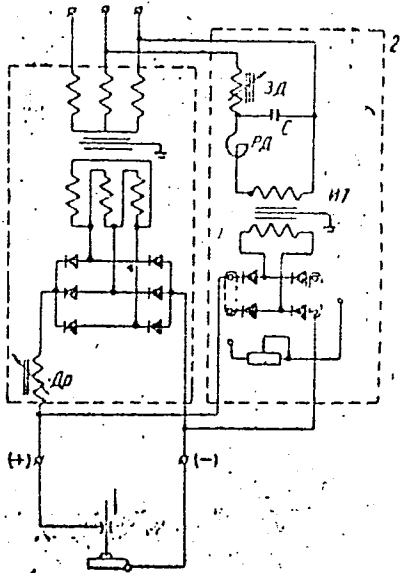


Fig. 1. Rectifying device for pulse-arc welding

1—Basic rectifier; Dr—choke coil; 2—auxiliary rectifier; IT—pulse transformer; ZD—charging controlled choke coil; RD—saturated discharge choke coil; S—capacitors.

Card 2/2 *eqh*

SUB CODE: 13/ SUBM DATE: 22May63/

ACC NR: AP7004760

SOURCE CODE: UR/0413/67/000/001/0056/0056

INVENTOR: Potap'yevskiy, A. G.; Buchinskiy, V. N.

ORG: none

TITLE: Device for feeding the welding arc. Class 21, No. 189973

SOURCE: Izobreteniya. promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 56

TOPIC TAGS: ~~welding~~, arc welding, pulse welding, ~~pulse~~ welding ~~device~~
~~equipment component~~

ABSTRACT: This Author Certificate introduces a device for feeding the welding arc with pulsed current. It consists of a dc source and an auxiliary rectifier fed from the network through an ignition interrupter, condensator and a pulse transformer. To obtain various forms of current pulses, adjustable active and inductive impedances are connected into the arms of the auxiliary full-wave rectifier. In one variant, the auxiliary rectifier is connected in parallel with the welding arc. In another variant, the auxiliary rectifier is connected in series with the welding arc. In a third variant,

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UDC: 621.314.632:621.791.75

ACC NR: AP7004760

one of the arms of the auxiliary rectifier, set up as a full wave rectifier with a common point, is connected in parallel with the welding arc, and the second arm is connected in series with the welding arc. Orig. art. [TD]
has: 1 figure.

SUB CODE: 13,09/ SUBM DATE: 16 Jul 64/ ATD PRESS: 5117

Card 2/2

ACC NR: AP7004759 (A) SOURCE CODE: UR/0413/67/000/001/0056/0056

INVENTOR: Lebedev, V. K.; Potap'yevskiy, A. G.

ORG: None

TITLE: A power supply for arc welding. Class 21, No. 189972

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 56

TOPIC TAGS: arc welding, power supply, power welding equipment

ABSTRACT: This Author's Certificate introduces a power supply for consumable electrode arc welding. The unit contains a three-phase rectifier or DC generator together with a capacitor and a resistance-shunted diode both connected in parallel with the arc. Metal sputtering is reduced and seam shaping conditions are improved by connecting a variable inductance in series with the capacitor.

SUB CODE: 13, 09/ SUBM DATE: 03Dec64

UDC: 621.791.75.03.621.314.632.4(083)

Card 1/1

ACC NR: AP6032553 (N) SOURCE CODE: UR/0125/66/000/009/0024/0027

AUTHOR: Potap'yevskiy, A. G.; Rayskiy, Ye. Ye.

ORG: [Potap'yevskiy] Electric Welding Institute im. Ye. O. Paton
AN UkrSSR (Institut elektrosvarki AN UkrSSR); [Rayskiy] Nikolayev Plant
im. I. I. Nosenko (Nikolayevskiy zavod)

TITLE: Carbon-dioxide welding of ship hull structures

SOURCE: Avtomaticheskaya svarka, no. 9, 1966, 24-27

TOPIC TAGS: STEEL, welding technology, carbon dioxide, ship, weld evaluation, weldability,
carbon dioxide welding, ship hull structure welding, steel
welding, weld property / 3S steel, 4S steel, 09G2 steel, SKhL-4 steel

ABSTRACT: The properties of 3S, 4S, 09G2 and SKhL-4 steel joints welded with a semiautomatic carbon dioxide shielded arc have been investigated. It was found that the outgassing of the electrode wire at 150—200C for 2 hr lowered the hydrogen and nitrogen content of welds from 5.0—6.5 ml/100 g and 0.05—0.06%, respectively to 1.4—1.7 ml/100 g and 0.012—0.020%. Carbon-dioxide welding yielded dense welds without microcracks and other defects. The microstructure of the weld metal consisted of ferrite and perlite. The heat-affected zone had about the same structure as in submerged arc welding, but its grain size was smaller. The weld metal contains much less of non-

Card 1/2

UDC: 621.791.75:621.315.618

ACC NR: AP6032553

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001

metallic inclusions than welds obtained by manual arc welding or submerged arc welding. Depending upon the type of steel, the Brinell hardness of weld metal varies between 156 to 173 kg/mm², and the tensile strength, elongation and reduction of area vary between 52.8 and 56.8 kg/mm², 23.5 and 28.3%, and 60.5 and 66.6%, respectively. The room-temperature notch toughness of welds obtained with 2 mm outgassed wire was 10.2—17.0 kgm/cm and the bend angle was not lower than 180°. Semiautomatic carbon-dioxide welding is being used on production scale for building hulls of large trawlers and, as a result, the production output has increased and costs have been reduced. Orig. art. has: 4 tables.

SUB CODE: 13, 11/ SUBM DATE: 04Jan66/ ORIG REF: 005/ OTH REF: 001

Card 2/2

43944-66 EWI(m)/EWP(k)/I/EWP(v)/EWP(t)/ETI IJP(c) JH/JD/IM
ACC NR: AP6027431 SOURCE CODE: UR/0125/66/000/007/0050/0000 46B

AUTHOR: Lapchinskiy, V. F.; Potap'yevskiy, A. G.; Steblovskiy, B. A.;
Vaynerman, A. Ye. (Vyborg)

ORG: Electric Welding Institute im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki
AN UkrSSR)

TITLE: Pulsed-power argon-shielded arc welding of aluminum alloys
AN UkrSSR

SOURCE: Avtomaticheskaya svarka, no. 7, 1966, 50-53

TOPIC TAGS: aluminum manganese alloy, aluminum alloy, welding, pulsed welding,
inert gas welding/AMg6 aluminum alloy

ABSTRACT: The effect of pulse duration and frequency in argon-shielded pulsed-power welding on the shape and dimensions of AMg6 aluminum-magnesium alloy welds has been investigated. Alloy sheets and plates 2.5—25 mm thick were welded with SvAMg6 wire and A- or B-grade argon. The arc behavior was recorded by a high-speed movie camera synchronized with an oscilloscope. It was found that as the pulse duration increases, the electrode burn-up rate and the width of the weld increase, but the depth of penetration increases, height of reinforcement first increase and then decrease (see Fig. 1a). With increasing pulse frequency, the electrode burn-up rate and depth of penetration increase at all welding positions (Fig. 1b). In welding AMg3, AMg5B, AMg6 and AMg61 aluminum alloys, the use of pulsed power reduces considerably the weld porosity and

UDC: 621.791.856.669.71

L 43044-66

ACC NR: AP6027431

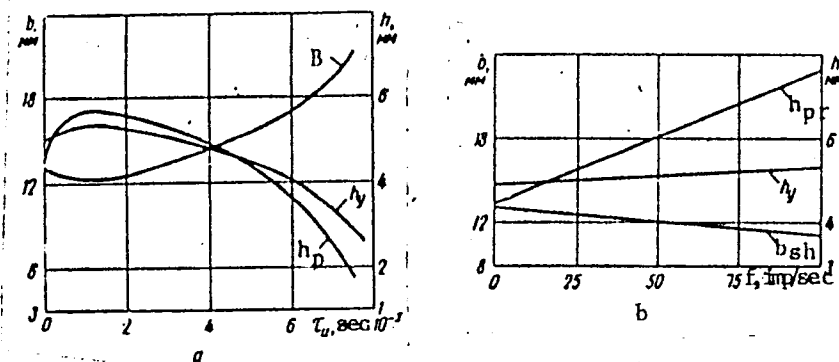


Fig. 1. Effects of pulse duration (a) and frequency (b) on width (B), depth of penetration (h_p) and height of reinforcement (h_y) of pulsed-power welds.

the amount of smoke as compared to conventional MIG welding. Pulsed-power welds in plates 10—25 mm thick had a strength of 27.9—29.4 kg/mm² and a bend angle of 53—72°, generally better than those of conventional MIG welds. Pulsed-power welding is suitable for all positions. It increases the output by 200—400%, and lowers the

Card 2/3

ACC NR: AFG002895 SOURCE CODE: UR/0286/65/000/024/0050/0050

AUTHOR: Potap'yevskiy, A. G.

ORG: none

TITLE: Welding blowpipe. Class 21, no. 177007

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no.24, 1965, 50

TOPIC TAGS: welding, metal welding, inert gas welding, welding electrode, welding equipment, arc welding, filler

ABSTRACT: The welding blowpipe for welding in gas envelopes with double protection with a melting electrode, consisting of a tip and a gas nozzle, is characterized by the fact that in order to increase the output, ensure high-quality welded joints of ample thickness, and reduce the size of the filler of the welded edges, the tip is mounted telescopically on a sliding fit in the gas nozzle so that it can shift with respect to the nozzle as the space for the filler metal is filled.

Card 1/2

Card 2/2

PATON, B.Ye.; POTAP'YEVSKIY, A.G.; PODOLA, N.V.

Pulsating arc welding with a consumable electrode and a programmed control of the process. Avtom.svar. 17 no.1:1-6 Ja '64. (MIRA 17:3)

1. Institut elektrosvariki imeni Patona AN UkrSSR.

POTAP'YEVSKIY, A.G.; LAPCHINSKIY, V.F.

Dynamic properties of current sources for welding in carbon dioxide.
Avtom. svar. 16 no.9:42-46 S '63. (MIRA 16:10)

1. Institut elektrosvariki im. Ye.O.Patona AN UkrSSR.

POTAP'YEVSKIY, A.G.; KORITSKIY, V.A.; Primalni uchastiye: MECIEV, V.S.;
MAKAROV, M.D.; VAYNSHTEYN, A.D.; KULIKOV, N.K.; SHILOVSKAYA, I.V.;
PAKMAN, S.M.; FEDOTOVA, L.P.; TATARINOV, G.V.

Ob-458m attachment for welding in CO₂ using PS-300, PS0-300,
and PS-500 transformers. Avtom.svar. 15 no.10:68-70
0 '62. (MIRA 15:11)

(Electric welding--Equipment and supplies)

ZARUBA, I.I.; POTAP'YEVSKIY, A.G.; MECHEV, V.S.

Improving the dynamic properties of welding generators. Avtom.
svar. 15 no.1:31-36 Ja '62. (MIRA 14:12)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvariki
imeni Ye.O. Patona AN USSR.
(Electric welding--Equipment and supplies)

S/125/62/000/007/006/012
D040/D113

AUTHOR: Potap'yevskiy, A.G.

TITLE: Determining the dynamic properties of current sources for CO₂ welding

PERIODICAL: Avtomaticheskaya svarka, no. 7, 1962, 43-49

TEXT: Methods used by the Institut elektrosvarki im Ye.O. Patona (Electric Welding Institute im. Ye.O. Paton) for determining the dynamic circuit characteristics of d.c. sources for CO₂ welding with consumable electrodes are described, and standard test methods are suggested. The article was published because of (1) the increasing use of this welding method in the USSR, (2) the high effect of dynamic circuit properties on the stability of the process and thus on the spatter and the weld contour, and (3) lack of published data on this subject. Recommendations are given for means of conducting oscillographing tests on current sources to be used for welding with thin or thick wire and having different rates of short circuit current growth and exponential or rectilinear current growth characteristics. A "standard" test circuit of 0.006-0.010 ohm and near-zero inductance is recommended. The Institute uses such a circuit consisting of 2 parallel welding wires, 70 mm² in cross section area and 10 m long. Detailed re-

Card 1/2

POBARI, Perona

"C" class linear amplifiers. Pt. 2. Radiotekhnika 13 no.5:170-
172 My '63.

5.3400

69993

AUTHORS: Bashkistrov, A. N., Corresponding Member of the AS USSR, Kamzolkin, V. V., Potarin, M. M., Kolovertnov, G. D. S/020/60/131/05/022/069 B011/B117

TITLE: Preparation of Higher Aliphatic Ketones by the Method of Dehydrogenation of Secondary Alcohols

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1067-1068 (USSR)

TEXT: The topic mentioned in the title has been studied using an industrial-type skeleton nickel catalyst. It was proved by the authors that it is possible to obtain a high yield (85% by weight), if the above-mentioned liquid-phase preparation method is used. The amount of the catalyst was 10% of the alcohol. Commercially produced $C_{16} - C_{19}$ alcohols containing 6% of hydrocarbons were dehydrogenated. The reaction temperature was 185° , the residual pressure 33 torr. From the kinetic curves of the reaction it follows that the reaction proceeds rapidly in the liquid phase, and is practically completed within two hours. The conversion degree of the alcohols reaches 95 mole % (Fig 1). At first, a vigorous separation of hydrogen takes place, the iodine number of the product decreases, probably as a result of the hydrogenation of the unsaturated compounds in the alcohols used. Then, the iodine number is somewhat increased which is due to a side reaction involving the dehydration of the alcohols. It could be established

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Preparation of Higher Aliphatic Ketones by the
Method of Dehydrogenation of Secondary Alcohols

6993
S/020/60/131/05/022/069
B011/B117

by chromatography on silica gel that the carbohydrate content was thereby increased from 6 to 10% by weight. The acid and ester content in the reaction products remains the same as the one in the alcohols used. The curves in figure 2 show that the dehydrogenation of the alcohols is accelerated by higher temperatures. Low pressure (33 torr) favors the reaction. The small quantity of unreacted alcohols was removed from the dehydrogenation product by esterification with boric acid. Substances not reacting with boric acid were distilled from the boric esters in vacuo (7 torr). The boiling-point range of the distillate was 115 to 120°. After removal of the hydrocarbons by means of chromatography on silica gel, a fraction of higher aliphatic ketones with d_4^{20} 0.8362, n_D^{20} 1.4446 and a carbonyl number of 202.0 was obtained. There are 2 figures and 5 references, 4 of which are Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute
of Petroleum-chemical Synthesis of the Academy of Sciences of the
USSR)

SUBMITTED: November 30, 1959

Card 2/2

POTARI, Ferenc, HA 5 KLP

Earthed-grid performance amplifiers in the amateur high-power transmitters. Radiotechnika 13 no.3:92-93 Mr '63.

POTARI, Ferenc (HA 5 KBP)

Simple solution for reducing impulse noise. Radiotechnika
12 no.5:138-139 My '62.

POTARI, Ferenc (HA 5 KBP)

Dimensioning of II-filter circuits. Radiotechnika 11 no.5:
143-144 My '61

POTARIN, M. M. Cand Chem Sci -- "Synthesis of higher aliphatic ketones by the method of ~~molecular oxidation~~ oxygen ~~oxidation~~." Mos, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Mos Inst of Fine Chem Technology im M.V. Lomonosov). (KL, 4-61, 187)

-76-

5 (3)

AUTHORS: Kamzolkin, V. V., Bashkirov, A. N., SOV/20-126-6-38/67
Corresponding Member AS USSR,
Potarin, M. M.

TITLE: On the Synthesis of Higher Ketones by Means of the Oxidation of
Paraffin Hydrocarbons (O sinteze vysshikh ketonov metodom oki-
sleniya parafinovykh uglevodorodov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1282 - 1285
(USSR)

ABSTRACT: The formation of the carbonyl compounds takes place in the ox-
idation of the paraffin hydrocarbons at 120-160° much more ra-
pidly in the initial stage than the formation of the alcohols
and acids. On the basis of the concepts on the order of the for-
mation of oxygen containing compounds (see scheme, Refs 1,2) it
may be maintained that in this case ketones are formed mainly
directly from hydroperoxide. Because of this observation ex-
periments were carried out to determine whether a directed syn-
thesis of higher ketones by means of the oxidation of paraffin
hydrocarbons is possible in the liquid phase. For this purpose
the authors studied the action of the reaction conditions as
well as of some additions on the rate of oxidation and on the

Card 1/5

On the Synthesis of Higher Ketones by Means of the
Oxidation of Paraffin Hydrocarbons

SOV/20-126-6-38/67

composition of some forming products. The fraction of synthetic hydrogenated paraffin hydrocarbons which boils out between 105 and 130° (1 torr) and which consists of carbons with 16 to 18 carbon atoms, was oxidized. The apparatus used and the method applied are described in reference 3. The temperature effects are shown by table 1. Their increase to 165° considerably intensifies the conversion of the initial hydrocarbons. A further increase to 185° remains practically without effect. The maximum yield of ketones was obtained at 120-140°. Also in the oxidation by a nitrogen oxygen mixture (3.5% O₂) the above regularities existed. By increasing this content to 21% O₂ the ketone portion in the reaction products decreased (Table 2). At the same time, however, the degree of conversion of the initial hydrocarbons increased. It is possible that other oxidation conditions may be found under which high ketone yields are obtained. Such e.g. the reduction of the specific consumption of the oxidizing gas (oxygen) from 1000 l/kg .^h to 200 l/kg .^h leads to ketone yields of about 55% computed with respect to the reacted paraffin (Table 2). Table 3 shows the effect exercised by

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On the Synthesis of Higher Ketones by Means of the
Oxidation of Paraffin Hydrocarbons

SOV/20-126-6-38/67

the duration of oxidation on the composition of the oxide (3.5% O_2+N_2 at 140°). The oxidation intensity increases and the ketone yield decreases with the longer duration. The optimum duration is 3-4 hours in the oxidation with air at 140° . It may be seen from figure 1 that at 120° the oxidation is inhibited after a certain maximum degree of conversion (which depends on the reaction conditions) is attained. Later, the ketone and acid portion increases somewhat at the expense of the alcohol portions (Fig 1 and experiments Nr 1,2,4,5 in table 2). In this case an alcohol oxidation may take place. The oxidation process of the hydrocarbons concerned takes place according to the chain mechanism of the free radicals where a bimolecular decomposition of hydroperoxide leads to a branching of the chain, see scheme (Ref 4). The self-acceleration of the reaction at relatively low temperatures is due to the peroxide decomposition. The oxidation rate depends on the formation rate and the concentration of the free radicals in the reaction zone. The decomposition may take place also due to an interaction with the radical of reaction III according to reference 1. The mentioned inhibition is

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On the Synthesis of Higher Ketones by Means of the
Oxidation of Paraffin Hydrocarbons

SOV/20-126-6-38/67

probably due to a rapid reduction or stoppage of the formation of free radicals which are responsible of the reaction course. At higher temperatures no inhibition occurs and the oxidation takes place to a considerable degree of conversion (Fig 2). Alcohols, esters, acids and other oxygen containing compounds accumulate, however, in high quantities. Additions of KMnO_4 , FeSO_4 etc. could not bring about an increase of the ketone yield. The results obtained indicate that the formation of free radicals takes place mainly according to reaction (III) and not according to (I) and (II). Thus, it was proved that the higher aliphatic ketones may be produced by direct oxidation of paraffin hydrocarbons with yields of approximately 65 mol% of the transformed hydrocarbon and at a degree of conversion of 10-15 mol%. There are 2 figures, 3 tables, and 5 references, 3 of which are Soviet.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences, USSR)

Card 4/5

On the Synthesis of Higher Ketones by Means of the
Oxidation of Paraffin Hydrocarbons

SOV/20-126-6-38/67

SUBMITTED: March 16, 1959

Card 5/5

BASHKIROV, A.N.; KAMZOLKIN, V.V.; JENIN, V.A.

Obtaining higher ketones by the dehydrogenation of secondary
alcohols over copper-chromium and nickel-chromium catalysts.
Neftekhimiya 4, no.2:298-300, Apr 61 (M RA 17:8)

1. Institut neftekhimicheskogo sinteza AN USSR imeni A.V. Topchi-
yeva.

5(2)

AUTHORS:

Bashkirov, A. N., Corresponding Member, SOV/20-127-1-24/65
AS USSR, Potarin, M. M., Kamzolkin, V. V.

TITLE:

The Synthesis of Higher Ketones by Liquid Phase Oxidation of
Secondary Alcohols (Sintez vysshikh ketonov metodom zhidko-
faznogo okisleniya vtorichnykh spirtov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959: Vol 127, Nr 1, pp 93-96
(USSR)

ABSTRACT:

The oxidation of the paraffin hydrocarbons in the liquid phase is considered to be a process of various stages. The succession of these stages is shown by a scheme (Refs 1-3). A considerable number of carbonyl compounds are formed, as a rule, in the production of synthetic sebacic acids by the oxidation of solid paraffins. The oxidation products of the higher paraffin hydrocarbons contain besides secondary alcohols (in the presence of boric acid) always a certain quantity of ketones (Ref 5). The carbonyl compounds (see Scheme) may be produced : a) by the decomposition of hydroperoxide (Ref 6); b) by the oxidation of the alcohols in the reaction zone. The authors attempted to clarify the possibility of oxidizing the alcohols to ketones under conditions similar to those of the oxidation of

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The Synthesis of Higher Ketones by Liquid Phase
Oxidation of Secondary Alcohols

SOV/20-127-1-24/65

hydrocarbons in the liquid phase, furthermore, the possibility of an orientated oxidation of secondary alcohols to ketones. For this purpose higher aliphatic alcohols (fraction boiling out within the range of from 125-170°, produced according to the method of reference 5) were used with a content of secondary alcohols of approximately 90 mole% (Ref 7). The apparatus and the method were already earlier described (Ref 5). The quantity of acids in the reaction products increases with rising temperature in the oxidation by means of an oxygen-nitrogen mixture (6.0-6.5 wt% O₂) during 4 hours at 120-180°.

in contrast to that of ketones which is reduced from 63.6 to 55.3 mole% (Table 1). Carbonyl compounds apparently cannot be accumulated in greater quantities at higher temperatures since they are rapidly oxidized to acids. These acids occur either free or as esters. The transformation degree of the initial alcohols is increased by the increase of O₂-concentration in the reaction zone, the relative yield of ketones, however, is reduced (Table 2). The reaction rate depends as a rule to a considerable extent on the O₂-concentration in the oxidizing

Card 2/4

The Synthesis of Higher Ketones by Liquid Phase
Oxidation of Secondary Alcohols

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gas. Its increase leads to greater yields of acids. The prolongation of the oxidation (Table 3, Fig 1) increases the transformation degree of the alcohols and the acid yield at the expense of the ketone yield. On the strength of the experimental results an oxidation method for alcohols could be chosen which guaranteed a ketone yield of 60 mole% in the case of a transformation degree of 40-45 mole% of alcohols; i.e.: temperature 165° , O_2 -content in the gas mixture

60-65 %, the specific consumption of the latter $1,000 \text{ l/kg}^h$, oxidation duration 3 hours. A higher yield of ketones may be obtained in the case of a lower transformation degree of the alcohols. Additions of Co-, Ni-, Mn-, Fe-, Cr-, Cu-, and Sn-salts are ineffective. Iron pentacarbonyl has a considerably inhibiting effect on the reaction. This proves its radical character. The data obtained are well in line with reference 8 with respect to the effect of boric acid and boric anhydride on the process mentioned in the title. There are 1 figure, 3 tables, and 8 Soviet references.

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The Synthesis of Higher Ketones by Liquid Phase
Oxidation of Secondary Alcohols

30V/20-127-1-24/65

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute of Petrochemical Synthesis of the Academy
of Sciences, USSR)

SUBMITTED: March 16, 1959

Card 4/4

POTARIN, M.M.

AEROV, M.E.; MOTINA, G.L.; POTARIN, M.M.

Rectifying the mixture of methanol-ethanol-water in a column
of continuous action. Zhur.prikl.khim. 30 no.7:1100-1103 J1 '57.
(MIRA 10:10)

(Distillation) (Alcohols)

Plastic masses. E. M. Rutash. Russ. 57,314, June 24, 1940. Animal tendons are ground, degreased with org. solvents, treated with decolorizing agents, dried, ground and pressed. Before pressing, CH_2O may be added.

POTASHENKO, P.

On a Siberian state farm. Sov.profsoiuzy 3 no.9:42-43 S '55.
(MLRA 8:12)

1. Predsedatel' rabochego komiteta profsoyuza sovkhoza "Sibiryak,"
Irkutskoy oblasti
(Irkutsk Province)

POTASHEV, A.M., inzh.

Making light-alloy ventilation pipes. Sudostroenie 25 no.7:47-48
Jl '59. (MIRA 12:12)
(Ships--Heating and ventilation) (Air pipes)

POTASHEV, E. I.

A Clasp for Gluing of Round Table Frames. Leka Promishlenost (Light Industry), #11:36:Nov. 1955

UGLOV, F.G.; KURBANGALEYEV, S.M.; BOKAREV, Yu.N.; VORONOV, A.A.; DEGTYAREVA, Z.Ya.; KRASNOSHCHKOVA, L.I.; MURSALOVA, F.A.; POTASHEV, L.V.;
RASSVETAYEV, I.L.; SIMBIRTSEV, S.A.; SOKOLOV, S.S.

Use of the artificial blood circulation apparatus built by the
Research Institute for Experimental Surgical Apparatus and Instru-
ments in an experiment. Trudy NIIKHAI no.5:132-137 '61.

(MIRA 15:8)

(PERFUSION PUMP (HEART))

SKRIFOV, V.F.; POTASHEV, P.I.

Heat transfer to carbonic acid along supercritical isotherms in the case of free convection. Inzh.-fiz. zhur. 5 no.2:30-34 F '62.

(MIRA 15:1)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova, Sverdlovsk.
(Heat--Transmission) (Heat--Convection) (Carbonic acid)

POTASHEV, V.

The first season of Karelia. Vest.prom.i khuz.promya. 2 no.7:6-7
Jl '61. (MIRA 15:1)

1. Predsedatel' Karel'skogo oblastnogo komiteta profsoyuza rabochikh
mestnoy promyshlennosti i kommunal'nogo khozyaystva.
(Karelia--Clothing industry) (Socialist competition)

POTASHEV, Ye. I., in. a.

From the work practices of Household Furniture Combine. Ser. prom.
13 no. 3:31-22 Nr 64 (MIRA 17:7)

POTASHEV, Ye.I., inzhener.

Mechanizing the production of furniture springs. Der.prom.5 no.4:
20-21 Ap '56. (MIRA 9:7)

1. Velikeluiskaya mebel'naya fabrika.
(Springs (Mechanism))

POTASHEVSKIY, G. V.

23844 IZ PATSIONALIZATORSKOGOOPYTA TIPOGRAFII "PECHATNIY DVOR"
(LENINGRAD) POLIGR. PROIZVODSTVO, 1949, NO. 4, S. 12-1 5

SO: LETOPIS' NO. 31, 1949

POTASHEVSKIY, N.D., aspirant; VERTINSKIY, K.I., prof., nauchnyy
rukovoditel'

Diagnosis of subclinical mastitis in cows. Veterinariia
42 no.9:74-77 S '65. (MIRA 18:11)

1. Moskovskaya veterinarnaya akademiya.

POTASHEVSKIY, N.D., aspirant; VERTINSKIY, K.I., nauchnyy rukovoditel'
raboty, prof.

Pathomorphology in mastitis. Veterinariia 42 no.12:71-74 D '65.
(MIRA 19:1)

1. Moskovskaya veterinarnaya akademiya.

AFANAS'YEV, A.A., dotsent; POTASHIN, N.G., inzhener.

Thickness gauge for footwear parts. Leg. prom. 16 no.7:
40-42 J1 '56.

(MLRA 9:10)

(Shoe industry) (Gauges)

POTASHIN, N. G.

AFANAS'YEV, A.A., dotsent; POTASHIN, N.G., inzhener.

Measuring shoe models with PP-2K planimeters. Leg.prom. 14 no.8:
28-30 Ag '54. (MLRA 7:8)
(Boots and shoes)

POKROVSKIY, P.V.; GRIGOR'YEV, N.A.; POTASHKO, K.A.

Secondary phosphates of beryllium and their distribution in the
weathering surface of mica-fluorite greisens. Trudy Inst. geol.
UFAN SSSR no.70:205-209 '65. (MIRA 18:12)

KIM, A.T.; POTASHKIN, K.G.

Work practices of Mine No.35 in the struggle for the title of
enterprise of communist labor. Ugol' 36 no.7:3-4 J1 '61.
(MIRA 15:2)

1. Glavnyy marksheyder shakhty No.35 kombinata karagandaugol' (for
Kim). 2. Nachal'nik ventilyatsii shakhty No.35 kombinata
Karagandaugol' (for Potashkin).

(Karaganda Basin--Coal mines and mining--Labor productivity)

POKROVSKIY, P.V.; GRIGOR'YEV, N.A.; POTASHKO, K.A.; AYZIKOVICH, A.N.

Moraesite from the Urals. Zap.Vses.min.ob-va. 92 no.2:232-239
'63. (MIRA 16:5)

1. Institut geologii Ural'skogo filiala AN SSSR i Ural'skoye
geologicheskoye upravleniye.
(Ural Mountains—Moraesite)

KUTEPOV, D.F.; POTASHNIK, A.A.; SHELUCHENKO, V.V.

Some N-derivatives of benzamidine. Zhur.ob.khim. 33 no.2:
579-581 F '63. (MIRA 16:2)
(Benzamidine)

KUTEPOV, D.F.; POTASHNIK, A.A.; BUKHARDINA, M.S.

Chlorination of symmetrical diphenylurea. Zhur.prikl.khim. 35
no.12:2797-2799 D '62. (MIRA 16:5)
(Urea) (Chlorination)

5 (3)

AUTHORS:

Kutepov, D. F., Potashnik, A. A.,
Vavilina, K. I.

SOV/79-29-6-17/72

TITLE:

Investigation in the Field of Synthesis and Transformations in the Series of Diaryl Ureas (Issledovaniye v oblasti sinteza i prevrashcheniy v ryadu diarilmochevin). VIII. On the Synthesis of Chlorine-substituted Diaryl Ureas (VIII. K voprosu sinteza khlorzameshchennykh diarilmochevin)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1857 - 1859 (USSR)

ABSTRACT:

In a previous paper (Ref 2) syntheses of chlorine-substituted diaryl ureas under different conditions and by means of phosgene were described, in which connection the reaction takes place vigorously already at room temperature owing to the high mobility of the hydrogen atoms in the amino groups. In contrast to these products the phosgenation with 2,4,6-trichloro- and 2,3,5,6-tetrachloro-aniline takes place only at high temperatures and in high-boiling solvents. In the present paper the authors investigated the phosgenation of 2,4,6-trichloro-aniline in chloro-benzene and 1,2,4-trichloro-benzene. The reaction of trichloro-aniline with phosgene was found to take place more readily in

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Investigation in the Field of Synthesis and Transformations in the Series of Diaryl Ureas. VIII. On the Synthesis of Chlorine-substituted Diaryl Ureas SOV/79-29-6-17/72

trichloro-benzene at increased temperature on otherwise equal conditions. It was found that at increasing temperature the reaction rate and the yield in the end product increases up to a certain optimum and then decreases. At this temperature increase apparently side reactions play a certain role which results in a partial or finally even complete decomposition of the hexachloro-diphenyl-urea. The comparison data on its synthesis indicate (Figure) that the yield in this urea is somewhat higher in trichloro-benzene than in chloro-benzene. The optimum reaction temperature in trichloro-benzene is 120° (in chloro-benzene 110°). The 2,2',3,3',5,5',6,6'-octachloro-diphenyl-urea not yet described in publications was synthesized. There are 1 table and 3 references, 2 of which are Soviet.

SUBMITTED: May 12, 1958

Card 2/2

KUTEPOV, D.F.; POTASHNIK, A.A.; RAZUMOVSKIY, V.V.,

Synthesis of 2,4,5-trichloroaniline from nontoxic isomers of
hexachlorocyclohexane. Zhur. prikl. khim. 34 no.2:362-366 7 '61.
(MIRA 14:2)

(Aniline)

(Cyclohexane)

SOV/79-29-3-22/61

5 (3)
AUTHORS:

Kutepov, D. F., Potashnik, A. A., Khokhlov, D. N.,
Tuzhilkina, V. A.

TITLE:

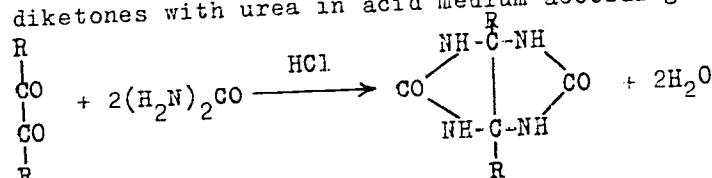
Reaction of Cyclic and Heterocyclic α -Diketones With Urea and Guanidine (Reaktsiya tsiklicheskikh i geterotsiklicheskikh α -diketonov s mochevinoy i guanidinom)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 855-858 (USSR)

ABSTRACT:

The synthesis of the diureides of the α -diketones according to H. Biltz (Ref 1) by reaction of the aliphatic and aromatic α -diketones with urea in acid medium according to the scheme



was likewise applied to the o-quinones by the authors. Under equal conditions they obtained the diureides of phenantrene quinone and its nitro derivatives in yields up to 90% (Ref 2). In the present paper the reaction of urea with cyclic and heterocyclic α -diketones was carried out. It was proved that

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Reaction of Cyclic and Heterocyclic α -Diketones With Urea and Guanidine

the urea reacts with the former (for instance with cyclohexanedione -1,2- and chlorocyclohexanedione -1,2) according to scheme 2 similarly to the acyclic α -diketones and o-quinones. The cyclohexanedione diureides which had hitherto not been described and chlorocyclohexanedione diureide were obtained. Chlorocyclohexanedione-1,2 was synthesized according to reference 3. The α -diketone 2,2,5,5-tetramethyl tetrahydrofuran-dione-3,4 obtained according to reference 4 reacts with urea not under formation of the diureide but of the monoureide of tetramethyl tetrahydrofuran-dione. This reaction proceeds apparently according to scheme 3. In contrast with the reaction of aliphatic and aromatic α -diketones as well as of the o-quinones with guanidine carbonate in aqueous alcoholic alkaline medium, under formation of the corresponding diguanyls (Ref 6) the reaction of the cyclic and heterocyclic α -diketones with guanidine has not been investigated. It was found that the cyclic α -diketones, similar to the acyclic ones, form with guanidine diguanyls. On reaction of the cyclohexanedione-1,2 with guanidine carbonate in aqueous alcohol medium the cyclohexanedione diguanyl carbonate was formed according to scheme 4.

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Reaction of Cyclic and Heterocyclic α -Diketones With Urea and Guanidine

The diguanyl of the chlorocyclohexanedione-1,2 could not be obtained because it is unstable in the above-mentioned alkaline reaction; in neutral and acid medium no reaction at all takes place with the α -diketones. The 2,2,5,5-tetramethyl tetrahydrofuranedione-3,4 yields with guanidine no diguanyl but a monoguanyl. There are 6 references, 2 of which are Soviet.

SUBMITTED: January 24, 1958

Card 3/3

25392
S/080/61/034/002/012/025
A057/A129

53600

AUTHORS: Kutepov, D.F., Potashnik, A.A., Razumovskiy, V.V.

TITLE: Preparation of 2,4,5-trichloroaniline from nontoxic isomers of hexachlorocyclohexane

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 362-366

TEXT: A method is described for the preparation of trichloroaniline from nontoxic hexachlorocyclohexane (666) isomers by nitration of 1,2,4-trichlorobenzene to 2,4,5-trichloronitrobenzene and reduction of the latter to 2,4,5-trichloroaniline. Reduction is carried out in an aqueous medium with pig iron turnings in the presence of an emulsifier of the non-ionic "ОП-7" ("OP-7") or "ОП-10" ("OP-10") type. The following procedure is presented: 95 g nontoxic 666-isomers, 100 ml H₂O and 40 g air-slaked lime are filled into an autoclave. The reaction occurs by mixing at 160-170°C and 6.3-8.1 atm in 2 hrs. The product is separated from slurry and the

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25392

S/080/61/034/002/012/025
A057/A:29

Preparation of 2,4,5-trichloroaniline ...

hurst, J. Chem. Soc., 202 (1945); B. Stewart et al, J. Chem. Soc., 66, 1781
(1944); R. Slade, Chem. Ind., 64, 314 (1945).

SUBMITTED: July 19, 1960

X

Card 3/4

KUTEPOV, D.F.; POTASHNIK, A.A.; KHOKHLOV, D.N.; KOZLOVA, N.V.

Synthesis and investigation in the series of symmetrical triazines. Part 1: Reaction of cyanuric chloride with 2,4,5-trichloroaniline. Zhur.ob.khim. 32 no.5:1572-1574 My '62. (MIRA 15:5)

(Cyanuric chloride) (Aniline)

S/138/62/000/006/003/008
A051/A126

AUTHORS: Grinberg, A.Ye., Chertkova, V.F., Potashnik, A.A.

TITLE: Protection of rubber mixes against scorching with organic chlor-
-containing compounds

PERIODICAL: Kauchuk i rezina, no. 6, 1962, 9 - 11

TEXT: Well-known and unknown chlor-containing compounds as inhibitors of scorching were studied: dichloromelamine (DChM), trichloromelamine (TChM), hexachloromelamine (HChM), cyanur chloride (CCh), trichlorocyanuric acid (TChCA), sodium salt of dichlorocyanuric acid, (Na-DChCA), N,N'-dichloro-bis(2,4,6-trichlorophenyl)-urea (Chloramine), dichlorobenzosulfamide (chloramine B). The effectiveness of the chlor-containing compounds as inhibitors of scorching was found to depend on their chemical structure, on the distribution of the chlorine atoms in the molecule, and not on the number of chlorine atoms, nor their percentage content in the molecule. TChM, TChCA, CCh and Na-DChCA were shown to be considerably active inhibitors. The first two compounds, however, sharply inhibit vulcanization and cause a drop in the physico-mechanical properties. Chloramine,

Card 1/2

5(3)

AUTHORS:

Kutepov, D. F., Potashnik, A. A., Rozanova, N. S.

TITLE:

Investigation in the Field of the Synthesis and the Transformations in the Series of Diaryl Ureas. IX. Synthesis of the Unsymmetric Diphenyl Ureas Chlorosubstituted in the Cycle

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3036-3038 (USSR)

ABSTRACT:

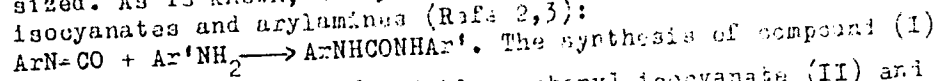
If the synthesis of the various aryl ureas is made by the reaction of the corresponding arylamines substituted in the cycle with phosgene, symmetrical diaryl ureas are always formed i.e. both aryl residues contain in the same positions the same amount of the same substituents. The case in which the substituents are directly introduced into the molecule of diaryl urea, e.g. in the chlorination of diphenyl urea, forms an exception. In the latter case certain amounts of the not completely chlorinated products i.e. of the symmetric tetrachlorodiphenyl urea and the unsymmetrical 2,4,6,2',4'-pentachlorodiphenyl urea (I) were found in the reaction mass besides hexachlorodiphenyl urea, the final product. The former was described in publications (Ref 1) the latter, however, has

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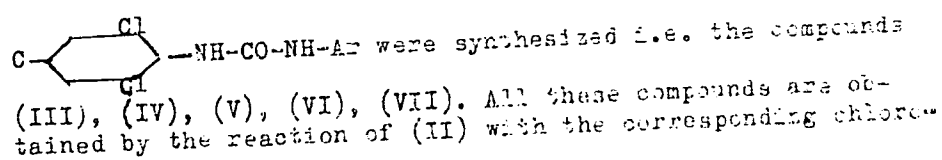
SOV/79-29-9-49/76

Investigation in the Field of the Synthesis and the Transformations in the Series of Diaryl Ureas. IX. Synthesis of the Unsymmetric Diphenyl Ureas Chlorosubstituted in the Cycle

hitherto not been obtained in pure state. For the purpose of investigating this theoretically and practically interesting compound more thoroughly, compounds of this type were synthesized. As is known, diaryl ureas may be obtained also from aryl isocyanates and arylamines (Refs 2,3):



could be based on 2,4,6-trichloro phenyl isocyanate (II) and dichloroaniline, or dichloro phenyl isocyanate and trichloroaniline. The authors chose the first of the two methods. The reaction rate of compound (II) in the reaction with amines which have a different amount of chlorine atoms in the cycle was of interest. Thus, some other unsymmetrical hitherto unknown chlorosubstituted diphenyl ureas of the general formula



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Investigation in the Field of the Synthesis and the Transformations in the Series of Diaryl Ureas. IX. Synthesis of the Unsymmetric Diphenyl Ureas Chlorosubstituted in the Cycle

substituted anilines in dry dichloroethane at 20° with the formation and the separation of the final products taking place at different rates. Obviously, position and number of the chlorine atoms in the molecule of the amines exercise a considerable influence on their reaction rate with compound (II). 4-chloroaniline proved to be the most reactive. All unsymmetrical thioureas obtained are colorless amorphous powders, insoluble in water and difficultly soluble in organic solvents. Formulas, melting points, and composition of the compounds investigated are tabulated. There are 1 table and 4 references, 1 of which is Soviet.

SUBMITTED: August 4, 1958

Card 3/3

KUTEPOV, D.F.; KHOKHLOV, D.N.; POTASHNIK, A.A.; TUZHILKINA, V.L.

Synthesis and transformations in the series of diarylureas.
Part 20: Synthesis of N-chloro derivatives of ureines and
guanyls of α -diketones and o-quinones. Zhur.org.khim. 1 no.2:
384-386 F '65. (MIRA 18:4)